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The vascular anatomy of dimerous and trimerous seedlings of Phaseolus vulgaris: J. ARTHUR HARRIS, E. W. SINNOTT AND J. Y. PENNY-PACKER.

Genetic investigations in Crepis: E. B. BABCOCK (read by title.)

Relationships among the genes for color variation in rodents: L. C. DUNN (read by title.)

Dice casting and pedigree selection: H. H. LAUGHLIN.

Known matings in a species with heteromorphic homologous chromosomes; recombinations obtained in F_1 and F_2 : E. ELEANOR CAROTHERS.

*The relation of the somatic chromosomes in *Aenothera Lamarckiana* and *O. gigas*:* R. T. HANCE. *Concerning the inheritance of broodiness in domestic fowl:* H. D. GOODALE (read by title.)

Heredity of twinning from the paternal side: C. B. DAVENPORT.

Notes on the human sex ratio: C. C. LITTLE.

An experiment on regulation in plants: E. N. HARVEY (read by title.)

*A series of allelomorphs in *Drosophila* with non-quantitative relationships:* H. J. MULLER.

The rate of evolution: E. G. CONKLIN.

The Naturalists' dinner was held on the evening of December 30 in the dining hall of the Graduate School of Princeton University with eighty-two in attendance. The presidential address by Edward M. East was entitled "Population."

The officers of the society for 1920 are:

President—Jacques Loeb, Rockefeller Institute for Medical Research.

Vice-president—Bradley M. Davis, University of Michigan.

Secretary—A. Franklin Shull, University of Michigan (1920-22).

Treasurer—J. Arthur Harris, Carnegie Station for Experimental Evolution (1918-20).

Additional members of the Executive Committee—John H. Gerould, Dartmouth College (1920); George H. Shull, Princeton University (1918-20); William E. Castle, Harvard University (1919-21); Edward M. East, Harvard University (1920-22).

BRADLEY M. DAVIS,
Secretary

THE AMERICAN PHYSICAL SOCIETY

THE twenty-first annual meeting (the 101st regular meeting) of the American Physical Society was held at Soldan High School in St. Louis, Missouri, on December 30, 31, 1919, and January 1, 1920, in affiliation with Section B—Physics—of

the American Association for the Advancement of Science.

At the business session held on December 31, 1919, officers for 1920 were elected as follows:

President—J. S. Ames.

Vice-president—Theodore Lyman.

Secretary—D. C. Miller.

Treasurer—G. B. Pegram.

Managing Editor—F. Bedell.

Councillors—F. B. Jewett and Max Mason.

Members of the Editorial Board—E. L. Nichols, C. M. Sparrow and W. F. G. Swann.

The question of the relation of the society to the work of the trustees for the Preparation of Critical Tables of Physical and Chemical Constants was brought before the society; after discussion it was, by general consent, referred to the president, the councillor and the trustee representing the society, for such action as may seem best.

At the meeting of the council held on December 30, 1919, the following elections were made: to *regular membership*, T. H. Gronwall, E. H. Kennard, Henry A. McTaggart; to *associate membership*, William H. Agnew, W. H. Bair, Vola P. Barton, Henry M. Brook, J. T. Lindsay Brown, John A. David, E. C. Gaskill, Charles W. Henderson, F. F. Householder, Teizo Isshiki, Charles S. Jewell, P. Kirkpatrick, F. W. Kranz, Charles P. Miller, George S. Monk, Chalmer N. Patterson, Herbert J. Plagge, Geo. E. Raburn, S. P. Shackleton, George C. Southworth, John Alden Terrell, John A. Tobin, A. P. Vanselow, E. E. Zimmerman; *transferred from associate to regular membership*, Harold D. Babcock, Clifton G. Found, R. C. Gibbs, J. A. Gray, Frank B. Jewett, Edwin C. Kemble, Fred Loomis Mohler, Lindley Pyle, C. V. Raman, Paul E. Sabine, F. B. Silsbee, Elmer H. Williams.

On Tuesday afternoon, December 30, 1919, the president, J. S. Ames, delivered an address on "Einstein's theory of gravitation and some of its consequences." This was a masterly presentation of the development and conclusions of this theory, and it was listened to by the largest audience of the meetings.

The session on the afternoon of Wednesday, December 31, 1919, was under the auspices of Section B—Physics—of the American Association of the Advancement of Science. The retiring chairman of Section B, Dr. G. F. Hull, gave an address on "Some aspects of physics in war and peace." Following this there was a symposium of four special papers on "Phenomena in the ultra-violet

spectrum, including X-rays," by R. A. Millikan, D. L. Webster, Wm. Duane and A. W. Hull.

The programs consisted of thirty-four papers, six of which were read by title only, presented at four different sessions. The program of eight papers given at the session of Wednesday morning, consisted exclusively of papers relating to acoustics. The average attendance was about eighty-five, the maximum being about one hundred and twenty-five. The program was as follows:

Variation of transparency to total radiation with temperature of source: S. LEROY BROWN.

The dissipation of heat by various surfaces in still air: T. S. TAYLOR.

The influence of air velocity and the angle of incidence on the dissipation of heat: T. S. TAYLOR.

The measurement of thermal expansion of metals at ordinary temperatures: CHARLES D. HODGMAN.

A method for determining the photographic absorption of lenses: G. W. MOFFITT.

Defects in centered quadric lenses: IRWIN ROMAN.
The sinker method applied to the rapid and accurate determination of specific gravities: N. W. CUMMINGS. (Read by title.)

Amplification of currents in the Bunsen flame: C. W. HEAPS.

A new type of non-inductive resistance: H. L. DODGE.

Some laboratory uses for the contract rectifier: J. C. JENSEN.

An undamped wave method of determining dielectric constants of liquids: W. H. HYSLOP and A. P. CARMAN. (Read by title.)

Difficulties in the theory of rain formation: W. J. HUMPHREYS.

A physical theory of ocean or reservoir temperature distributions, regarded as effects of solar radiation, evaporation and the resulting convection: GEO. F. McEWEN.

Electromagnetic induction and relative motion: W. F. G. SWANN.

The influence of blowing pressure on pitch of organ pipes: ARTHUR C. LUNN.

A photographic study of explosions in gases: JOHN B. DUTOHER.

A photographic study of sound pulses through crooked and curved tubes, with deductions concerning telephone mouthpieces, phonograph horns, etc.: ARTHUR L. FOLEY.

A photographic method of measuring the instantaneous velocity of sound waves at points near the source: ARTHUR L. FOLEY.

A possible standard of sound—I., study of operating conditions; II., study of wave form: CHAS. T. KNIPP.

The performance of conical horns: G. W. STEWART.

A photographic study of the wave-form of sounds from large guns in action: DAYTON C. MILLER.

The calibration of a round chamber and sound sources and the measurement of sound transmission of simple partitions: PAUL E. SABINE.

Transmissions of sound through walls: F. R. WATSON.

Charcoal absorption and cyclic changes: THOS. E. DOUBT.

The heat of vaporization and work of ionization: C. S. FAZEL. (Read by title.)

Energy content of characteristic radiations: CHESTER W. RICE.

The spectrum of radium emanation: R. E. NY-SWANDER, S. C. LIND and R. B. MOORE.

The Zeeman effect for electric furnace spectra: ARTHUR S. KING. (Read by title.)

Critical potentials of the "L" series of platinum: DAVID L. WEBSTER.

On the possibility of pulling electrons from metals by powerful electric fields: R. A. MILLIKAN and B. E. SHACKELFORD.

On the recoil of Alpha particles from light atoms: L. B. LOEB. (Read by title.)

Reactive hydrogen in the electrical discharge: GERALD L. WENDT and ROBERT S. LANDAUER. (Read by title.)

The construction and design of a device permitting the application of a current pulse for a predetermined number of milliseconds: LYNDLEY PYLE.

The spectral transmission of various glasses: HENRY P. GAGE.

DAYTON C. MILLER,
Secretary

SCIENCE

A Weekly Journal devoted to the Advancement of Science, publishing the official notices and proceedings of the American Association for the Advancement of Science

Published every Friday by

THE SCIENCE PRESS

LANCASTER, PA.

CARRISON, N. Y.

NEW YORK, N. Y.

Entered in the post-office at Lancaster, Pa., as second class matter